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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,537	02/26/2004	Hajime Nakamura	60931 (47762)	9442

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EDWARDS ANGELL PALMER & DODGE LLP
P.O. BOX 55874
BOSTON, MA 02205

EXAMINER	
WOLDEKIDAN, HIBRET ASNAKE	
ART UNIT	**PAPER NUMBER**
2613	
MAIL DATE	**DELIVERY MODE**
04/02/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/789,537	NAKAMURA ET AL.	
	Examiner	Art Unit	
	Hibret A. Woldekidan	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _18 December 2008_.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-20_ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) _3,5,8,10,13,15,18 and 20_ is/are allowed.

6)☒ Claim(s) _1,2,4,6,7,9,11,12,14,16,17 and 19_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _26 February 2004_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Examiner acknowledges receipt of Applicant's Amendments, remarks, arguments received on 12/18/08. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and he prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1,2,4,6,7,9,11,12,14,16,17,19 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Ge et al. (6,819,870) in views of Duser et al. (Performance of a Dynamically Wavelength-Routed, Optical Burst Switched Network ©2001 IEEE).

Consider claim 1 Ge discloses a wavelength path switching node apparatus that is used in an optical communication network that performs multiplex transmissions by allocating a plurality of traffic items to a plurality of wavelength paths using a wavelength division multiplexing transmission scheme **(See abstract, Col. 10 lines 1-7, fig. 1 i.e. an optical wavelength path switching unit that performs multiplex transmissions and allocates a plurality of packets to a plurality of wavelength paths)**, comprising: a buffer that stores packets of input traffic **(See Col. 9 line 66-Col. 10 lines 5, Fig. 1 i.e. since the multiplexing/demultiplexing unit(110) receives the incoming data**

packets(105) and stores the incoming data packets to convert their original wavelength to a wavelength assigned by the control block(125), the multiplexing/demultiplexing units(110) can be considered as input buffers for storing incoming traffic); a packet transmission control section that fetches packets from the buffer **(See Col. 10 lines 4-12 and 43-45, fig. 1 i.e. a packet transmission control section which is the optical routers(115) that fetches packet from multiplexing/demultiplexing unit(110))**, and, with top priority given to a semifixed initial path, distributes the packets to the initial path**(See Col. 7 lines 27-37 i.e. When the incoming packets are assigned to the wavelengths, priority is given to the minimally occupied wavelength. The incoming packets are sequentially assigned to each available wavelengths until all the available wavelength are full)**; a control section that controls allocations of the additional paths based on distribution states of packet units in the packet transmission control section**(See Col. 4 lines 36-49, fig. 2 i.e. a controller will allocate a wavelength for each packet until all the wavelength are being used)**; and a wavelength path switching section that switches wavelength paths in accordance with the allocation control of the additional paths**(See Col. 9 lines 53-58, fig. 1 i.e. optical switching unit(120) for switching optical paths to the appropriate destination based on the allocation information received from the controller(125))**.

Ge discloses when a new packet arrives, the controller assigns a wavelength to the newly arrived packets in a predetermined order until all the available wavelengths are being occupied. Once all the wavelengths are full, the packets will be dropped **(See Col. 11 lines 15-20, fig. 2 steps(265,270))**.

Ge does not explicitly disclose dynamically assigning additional path for the extra packets so that the packets will be prevented from being dropped.

Duser teaches when there is extra traffic or traffic overflow, the extra packets are dynamically allocated by using additional paths**(See Page 2140 Section II Paragraph 2-3 i.e. dynamically assigning packets to a free wavelength to protect traffic overflow)**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Ge, and distribute packets to dynamically allocated additional paths when there is extra traffic or traffic overflow, as taught by Duser, thus providing a means of preventing data lose by dynamically assigning an additional new wavelength when there is a traffic overflow, as discussed by Duser **(Page 2140 Section II Paragraph 3)**.

Consider claim 2 Ge discloses a wavelength path switching node apparatus that is used in an optical communication network that performs multiplex transmissions by allocating a plurality of traffic items to a plurality of wavelength paths using a wavelength division multiplexing transmission scheme **(See abstract, Col. 10 lines 1-7, fig. 1 i.e. an optical wavelength path switching unit that performs multiplex transmissions and allocates a plurality of packets to a plurality of wavelength paths)**, comprising: a monitoring section that monitors packets of input traffic that are distributed**(See Col. 11 lines 14-22. fig. 1,2 i.e. the distribution states of the allocated path are controlled by the extra wavelength left in the FDL unit(See step 265 of fig. 2). if the wavelengths FDL unit(135 of fig. 1) are not full routing packet will continue.**

However, if all the wavelengths in the FDL unit are full, the newly arrived packet will not be assigned a wavelength instead they will be dropped. This shows that the FDL (135 of fig. 1) inherently perform monitoring for the controller(125 of fig. 1) so that the controller(125 of fig. 1) can assign a wavelength to the newly arrived packets), with top priority given to a semifixed initial path, to the initial path **(See Col. 7 lines 27-37 i.e. When the incoming packets are assigned to the wavelengths, priority is given to the minimally occupied wavelength. The incoming packets are sequentially assigned to each available wavelengths until all the available wavelength are full)**; a control section that controls allocations of the additional paths based on distribution states of packet units obtained by the monitoring**(See Col. 4 lines 36-49, fig. 2 i.e. when a new packet arrive at the router, a controller(125) will allocate a wavelength for each packet based on the availability of free wavelength in the FDL unit(135))**; and a wavelength path switching section that switches wavelength paths in accordance with the allocation control of the additional paths **(See Col. 9 lines 53-58, fig. 1 i.e. optical switching unit(120) for switching optical paths to the appropriate destination based on the information received from the controller(125))**.

Ge discloses when a new packet arrives, the controller assigns a wavelength to the newly arrived packets in a predetermined order until all the available wavelengths are being occupied. Once all the wavelengths are full, the packets will be dropped **(See Col. 11 lines 15-20, fig. 2 steps(265,270))**.

Ge does not explicitly disclose dynamically assigning additional path for the extra packets so that the packets will be prevented from being dropped.

Duser teaches when there is extra traffic or traffic overflow, the extra packets are dynamically allocated by using additional paths**(See Page 2140 Section II Paragraph 2-3 i.e. dynamically assigning packets to a free wavelength to protect traffic overflow)**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Ge, and distribute packets to dynamically allocated additional paths when there is extra traffic or traffic overflow, as taught by Duser, thus providing a means of preventing data lose by dynamically assigning an additional new wavelength when there is a traffic overflow, as discussed by Duser **(Page 2140 Section II Paragraph 3)**.

Consider claim 4 Ge and Duser disclose the wavelength path switching node apparatus according to claim 1, wherein the packet transmission control section distributes packets to the additional paths **(See Duser: Page 2140 Section II Paragraph 2-3 i.e. dynamically assigning packets to a free wavelength to protect traffic overflow)** and distributing packets in a predetermined order of priorities **(See Ge: Col. 4 lines 36-39 i.e. selecting packets in a predetermined order or sequence and assign wavelength for each packet for distribution).**

Consider claim 6 Duser teaches the wavelength path switching node apparatus according to claim 1, wherein the control section allocates at least one reserve additional path when packets are being distributed **(See Duser: Page 2140 Section II**

Paragraph 2-3 i.e. the control node allocates a free additional wavelength for distributing additional traffic as needed).

Consider claim 7 Duser teaches the wavelength path switching node apparatus according to claim 2, wherein the control section allocates at least one reserve additional path when packets are being distributed **(See Duser: Page 2140 Section II Paragraph 2-3 i.e. the control node allocates a free additional wavelength for distributing additional traffic as needed)**.

Consider claim 9 Duser teaches the wavelength path switching node apparatus according to claim 4, wherein the control section allocates at least one reserve additional path when packets are being distributed **(See Duser: Page 2140 Section II Paragraph 2-3 i.e. the control node allocates a free additional wavelength for distributing additional traffic as needed)**.

Considering Claim 11 Ge discloses a wavelength path allocation method for a wavelength path switching node apparatus that is used in an optical communication network that performs multiplex transmissions by allocating a plurality of traffic items to a plurality of wavelength paths using a wavelength division multiplexing transmission scheme **(See abstract, Col. 10 lines 1-7, fig. 1 i.e. an optical wavelength path switching unit that performs multiplex transmissions and allocates a plurality of packets to a plurality of wavelength paths)** comprising: a step in which packets of input traffic are stored in a buffer traffic **(See Col. 9 line 66-Col. 10 lines 5, Fig. 1 i.e. since the multiplexing/demultiplexing unit(110) receives the incoming data packets(105) and store the incoming data packets to convert their original**

wavelength to a wavelength assigned by the control block(105), the multiplexing/demultiplexing unit(110) can be considered as input buffers for storing incoming traffic); a packet distributing step in which packets are fetched from the buffer**(See Col. 10 lines 4-12 and 43-45, fig. 1 i.e. the optical routers(115) that fetches packet from multiplexing/demultiplexing unit(110))**, and, with top priority given to a semifixed initial path, the packets are distributed to the initial path **(See Col. 7 lines 27-37 i.e. When the incoming packets are assigned to the wavelengths, priority is given to the minimally occupied wavelength. The incoming packets are sequentially assigned to each available wavelengths until all the available wavelength are full)**; and a step in which allocations of the additional paths are controlled based on distribution states of packet units in the packet distributing step**(See Col. 4 lines 36-49, fig. 1,2 i.e. when a new packet arrive at the router, a controller unit(125 of fig. 1) will allocate a wavelength for each packet until all the wavelength are being used)**.

Ge discloses when a new packet arrives, the controller assigns a wavelength to the newly arrived packets in a predetermined order until all the available wavelengths are being occupied. Once all the wavelengths are full, the packets will be dropped **(See Col. 11 lines 15-20, fig. 2 steps(265,270))**.

Ge does not explicitly disclose dynamically assigning additional path for the extra packets so that the packets will be prevented from being dropped.

Duser teaches when there is extra traffic or traffic overflow, the extra packets are dynamically allocated by using additional paths**(See Page 2140 Section II Paragraph**

2-3 i.e. dynamically assigning packets to a free wavelength to protect traffic overflow).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Ge, and distribute packets to dynamically allocated additional paths when there is extra traffic or traffic overflow, as taught by Duser, thus providing a means of preventing data lose by dynamically assigning an additional new wavelength when there is a traffic overflow, as discussed by Duser **(Page 2140 Section II Paragraph 3)**.

Consider claim 12 Ge discloses a wavelength path allocation method for a wavelength path switching node apparatus that is used in an optical communication network that performs multiplex transmissions by allocating a plurality of traffic items to a plurality of wavelength paths using a wavelength division multiplexing transmission scheme **(See abstract, Col. 10 lines 1-7, fig. 1 i.e. an optical wavelength path switching unit that performs multiplex transmissions and allocates a plurality of packets to a plurality of wavelength paths)**, comprising: a step of monitoring which packets of input traffic that are distributed**(See Col. 4 lines 36-49, fig. 2 i.e. a step in which packets are selected in sequence or predetermined order and assigned a wavelength by a controller block(125))**, with top priority given to a semifixed initial path, to the initial path**(See Col. 7 lines 27-37 i.e. When the incoming packets are assigned to the wavelengths, priority is given to the minimally occupied wavelength. The incoming packets are sequentially assigned to each available wavelengths until all the available wavelength are full)**; and a step of controlling

which allocations of the additional paths based on distribution states of packet units obtained by the monitoring **(See Col. 11 lines 14-22. fig. 1,2 i.e. the distribution states of the allocated path are controlled by the extra wavelength left in the FDL unit(See step 265 of fig. 2). if the wavelengths FDL unit(135 of fig. 1) are not full routing packet will continue. However, if all the wavelengths in the FDL unit are full, the newly arrived packet will not be assigned a wavelength instead they will be dropped. This shows that the FDL (135 of fig. 1) inherently perform monitoring for the controller(125 of fig. 1) so that the controller(125 of fig. 1) can assign a wavelength to the newly arrived packets))**.

Ge discloses when a new packet arrives, the controller assigns a wavelength to the newly arrived packets in a predetermined order until all the available wavelengths are being occupied. Once all the wavelengths are full, the packets will be dropped **(See Col. 11 lines 15-20, fig. 2 steps(265,270))**.

Ge does not explicitly disclose dynamically assigning additional path for the extra packets so that the packets will be prevented from being dropped.

Duser teaches when there is extra traffic or traffic overflow, the extra packets are dynamically allocated by using additional paths**(See Page 2140 Section II Paragraph 2-3 i.e. dynamically assigning packets to a free wavelength to protect traffic overflow)**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Ge, and distribute packets to dynamically allocated additional paths when there is extra traffic or traffic overflow, as taught by

Duser, thus providing a means of preventing data lose by dynamically assigning an additional new wavelength when there is a traffic overflow, as discussed by Duser **(Page 2140 Section II Paragraph 3)**.

Consider claim 14 Ge and Duser disclose the wavelength path switching node apparatus according to claim 1, wherein the packet transmission control section distributes packets to the additional paths **(See Duser: Page 2140 Section II Paragraph 2-3 i.e. dynamically assigning packets to a free wavelength to protect traffic overflow)** and distributing packets in a predetermined order of priorities **(See Ge: Col. 4 lines 36-39 i.e. selecting packets in a predetermined order or sequence and assign wavelength for each packet for distribution).**

Consider claim 16 Ducer teaches the wavelength path allocation method according to claim 11, wherein, in the control step, at least one reserve additional path is allocated when packets are being distributed **(See Duser: Page 2140 Section II Paragraph 2-3 i.e. the control node allocates a free additional wavelength for distributing additional traffic as needed)**.

Consider claim 17 Ducer teaches the wavelength path allocation method according to claim 12, wherein, in the control step, at least one reserve additional path is allocated when packets are being distributed **(See Duser: Page 2140 Section II Paragraph 2-3 i.e. the control node allocates a free additional wavelength for distributing additional traffic as needed)**.

Consider claim 19 Ducer teaches the wavelength path allocation method according to claim 14, wherein, in the control step, at least one reserve additional path

is allocated when packets are being distributed **(See Duser: Page 2140 Section II Paragraph 2-3 i.e. the control node allocates a free additional wavelength for distributing additional traffic as needed)**.

Allowable Subject Matter

Claim 3,5,8,10,13,15,18,20 are allowed.

Conclusions

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hibret A. Woldekidan whose telephone number is (571)270-5145. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on 5712723078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. A. W./
Examiner, Art Unit 2613

/Kenneth N Vanderpuye/
Supervisory Patent Examiner, Art Unit 2613